2010008

COMMONWEALTH of VIRGINIA

Virginia Port Authority
600 World Trade Center
Norfolk, Virginia 23510-1679
Telephone (757) 683-8000
Fax (757) 683-8500

Jerry A. Bridges
Executive Director

January 30, 2009

Charles Badger, Director
Virginia Department of Rail and Public Transportation
1313 East Main Street, Suite 300
Richmond, VA 23219

RE: Rail Enhancement Funding Application
Norfolk International Terminals Central Rail Yard Expansion

Dear Charles,

Please accept the enclosed Rail Enhancement Funding application package submitted on behalf of the Virginia Port Authority (VPA). This application is seeking funding for Phase 2 construction for the Norfolk International Terminals (NIT) Central Rail Yard Expansion.

The project is a two-phase, $43,621,000 rail yard expansion project to be completed over a four year period. The project will expand the Terminal's rail yard to a total capacity of 37,000 track feet through construction of an additional 24,000 feet of railroad track, ties and ballast, several switches, heavy-duty pavement in the rail yard area, container handling areas, and associated civil site utility and electrical infrastructure.

These improvements will enable the NIT to increase the annual volume of containers moved by rail from 250,000 TEUs to 500,000 TEUs. This will facilitate the movement of larger volumes of cargo by rail instead of trucks, thus decreasing congestion on local and state highways. The project will also decrease train at-grade rail crossings at Hampton/ Terminal Blvd, increase "within fenceline" security of containers, decrease noise levels for local area residents, and increase the Port's competitiveness while supporting several VTrans2025 and Virginia State Rail Plan goals.

VPA, through revenue generated from Virginia International Terminals (VIT) terminal operations (as opposed to Commonwealth Port Funds provided by the Commonwealth of Virginia), will provide a 60% match totaling $26,146,000 to fund Phase 1 design and construction, as well as equipment lease and/or acquisition. Phase 1 construction was completed in November 2008. The requested Rail Enhancement Funds amount to 40% or $17,475,000, and are for Phase 2 construction. We plan to award the Phase 2 construction in August 2009, and have construction completed by October, 2010.

Please let us know if any additional information is needed, or if a briefing would facilitate a better understanding of the NIT Central Rail Yard Expansion project, and the importance of this Grant application to its ultimate success.

Sincerely,

Kevin P. Abt, P.E.
Chief Engineer

Enclosures

Internal Use
2010008
DRPT Tracking #

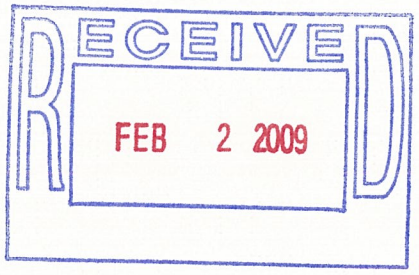
Virginia Department of Rail and Public Transportation
The Smartest Distance Between Two Points

Rail Enhancement Fund
Project Application Form

Date: **01/30/2009**

A. Name of Applicant (Name and Address)

Virginia Port Authority
600 World Trade Center
Norfolk, VA 23510



Applicant type:
__ Passenger Railroad
__ Freight Railroad
__ Locality
__ Business
_x_ Other (Regional Agency)

B. Contact Information:

Responsible Person/Title: Jeff Florin/Deputy Executive Director, Operations, COO

Telephone: 757-683-2150; Fax: 757-683-2151; Email: jflorin@ portofvirginia.com

Project Manager/Title: Kevin Abt/Chief Engineer

Telephone: 757-683-2139; Fax: 757-683-2151; Email: kabt@portofvirginia.com

C. Project Title: Norfolk International Terminals Central Rail Yard Expansion

D. Project Location: (City/County, Rail line, Railroad Mile Post, attach map)

Norfolk International Terminals
7737 Hampton Blvd.
Norfolk, VA 23505

E. Owner of Property/Right-of-Way/Facility/Personal Property: Virginia Port Authority

F. Responsible Party for Continuous Maintenance of Project: Virginia Port Authority

G. Project Information:

1) Description of Project:

The **NIT Central Rail Yard Expansion** (Figure 1) is a two-phase, $40 million rail yard expansion project to be completed over a four year period. The project will expand the Terminal's rail yard to a total capacity of 37,000 track feet through construction of an additional 24,000 feet of railroad track, ties and ballast, several switches, heavy-duty pavement in the rail yard area, container handling areas, and associated civil site utility and electrical infrastructure.

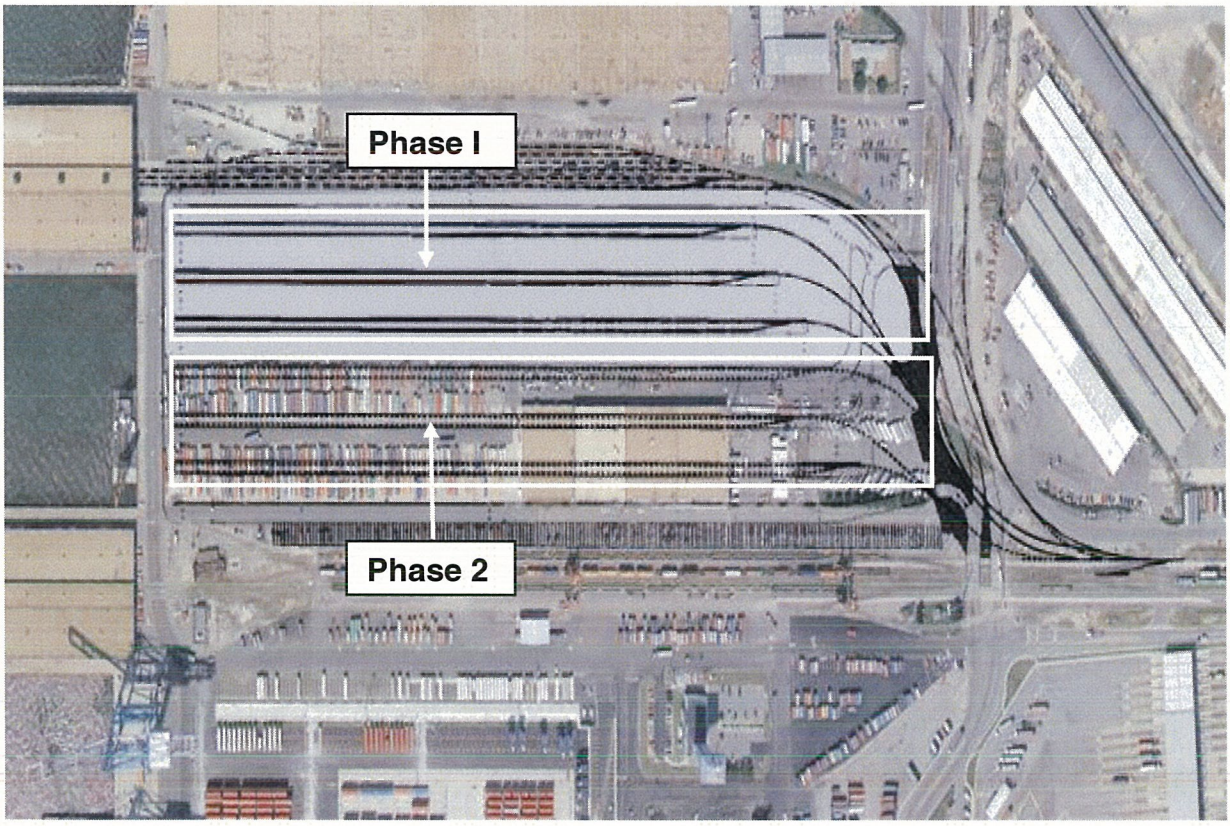


Figure 1: NIT Central Rail Yard Expansion

Figure 2: NIT and Surrounding Norfolk Area

2) Project Objective:

Over the past 10 years, the total volume of container traffic in the Port of Virginia marine terminals has increased at an annual rate of 8%. In CY 2008, more than 2.1 million twenty-foot equivalent units (TEUs) were handled by the Port. With the scheduled opening of the Heartland Corridor in early 2010, the recent clearance of the CSX double stack line to Atlanta, and the planned addition of the Third Lock in the Panama Canal by 2014, this trend is expected to continue to grow at an annual rate of 4.3% (as discussed in Virginia State Rail Plan). To meet the increased volume of container traffic, the Port has developed a multi-faceted strategy to increase the capacity and efficiency of its terminals. This includes replacing obsolete and aged infrastructure through a series of projects that will increase the number of ship berths, expand the container yards, and increase rail capacity.

The Port of Virginia moves a higher percentage of containers by rail than any other east coast port. Rail volume remains the fastest growing sector of the Port's volume of business. As the only Port terminal with "on-dock" rail service, the Norfolk International Terminals (NIT) handle the vast majority of the intermodal container traffic. However, intermodal expansion is limited by the size and configuration of the existing rail yard, and has reached maximum capacity.

These rail improvements will revolutionize Port rail operations, by eliminating less efficient hustlers and rubber-tired gantry cranes and converting to shuttle carriers and top picks. This will significantly increase the velocity of rail operations and achieve efficiencies similar to those realized when the Port implemented straddle carriers for handling vessel operations. The shuttle carrier/top pick operation allows each piece of equipment to operate decoupled and at maximum efficiency without the need to wait for another piece of equipment to hand off the containers.

The project will enable the NIT to increase the annual volume of containers moved by rail from 250,000 TEUs to 500,000 TEUs. This will facilitate the movement of larger volumes of cargo by rail instead of trucks, thus decreasing congestion on local and state highways. The project will also decrease train at-grade rail crossings at Hampton/ Terminal Blvd, increase "within fenceline" security of containers, decrease noise levels for local area residents (Figure 2), and increase the Port's competitiveness while supporting several VTrans2035 and Virginia State Rail Plan goals.

3) Relationship to Other Projects under Development by Applicant or Previously Funded by this Program:

The following additional projects (Figure 3), funded by the Virginia Port Authority (VPA) in large part through Virginia International Terminals (VIT) terminal operations revenue, are related to NIT terminal and rail service expansion, and have been, or are nearing, completion:

1. **NIT South Renovation.** This project entails the complete renovation of NIT South. The entire project area comprises approximately 150 acres and is being completed in stages so as not to interfere with cargo operations. Work began in 2004, and includes renovation of the entire container yard, construction of a 4230 ft wharf, installation of eight Suez-Class cranes, purchase of 70 straddle carriers, as well as utility upgrades and pavement improvements. Approximate construction cost: $280 million.

2. **NIT Shuttle Carrier Road.** This project, which will facilitate movement of containers from the NIT North Wharf to the new Central Rail Yard, includes the construction of approximately 3,000 linear feet of heavy duty shuttle carrier pavement along Bulkhead Avenue from Third Street to Lagoon Avenue. Construction activities include erosion and sediment control, site demolition, earthwork, drainage, water distribution, asphalt pavement, concrete pavement, waterfront structural improvements, rail crossings, site lighting, electrical duct bank, utilities, traffic control, construction phasing, and tie-in with existing waterfront features, drainage lines and rail yard facilities. Approximate construction cost: $8 million.

3. **Norfolk Portsmouth Belt Line (NPBL) Railroad Acquisition and Repair.** This project (Figure 2) involves the acquisition of 33.5 acres of property, and repair/upgrade of the Norfolk Portsmouth Belt Line freight rail yard, rail infrastructure, and associated railroad track. This project will facilitate a more efficient assembling and movement of train segments on the Norfolk International Terminals (NIT) by adding another 16,632 track feet of rail, including a train segment staging area. The estimated costs are $5,000,000 for property acquisition (acreage and existing track) and $3,500,000 for repair/upgrade of existing railroad infrastructure.

4. **Commonwealth Railway Mainline Safety Relocation Project (CRMSRP).** VPA is the lead state agency for this project, which is being partially funded with $25.8 million in FY 07-09 Rail Enhancement Funds. This $60 million undertaking will relocate the existing Commonwealth Railway (CWRY) mainline track to the medians of I-664 & the Western Freeway (Route 164), thus eliminating 14 at-grade rail crossings in Portsmouth & Chesapeake. The CRMSRP is part of the $309 million Heartland Corridor, a multi-state, federally funded rail transportation improvement project of national significance that will improve overall rail access between the Port of Virginia & the markets of the Midwestern United States.

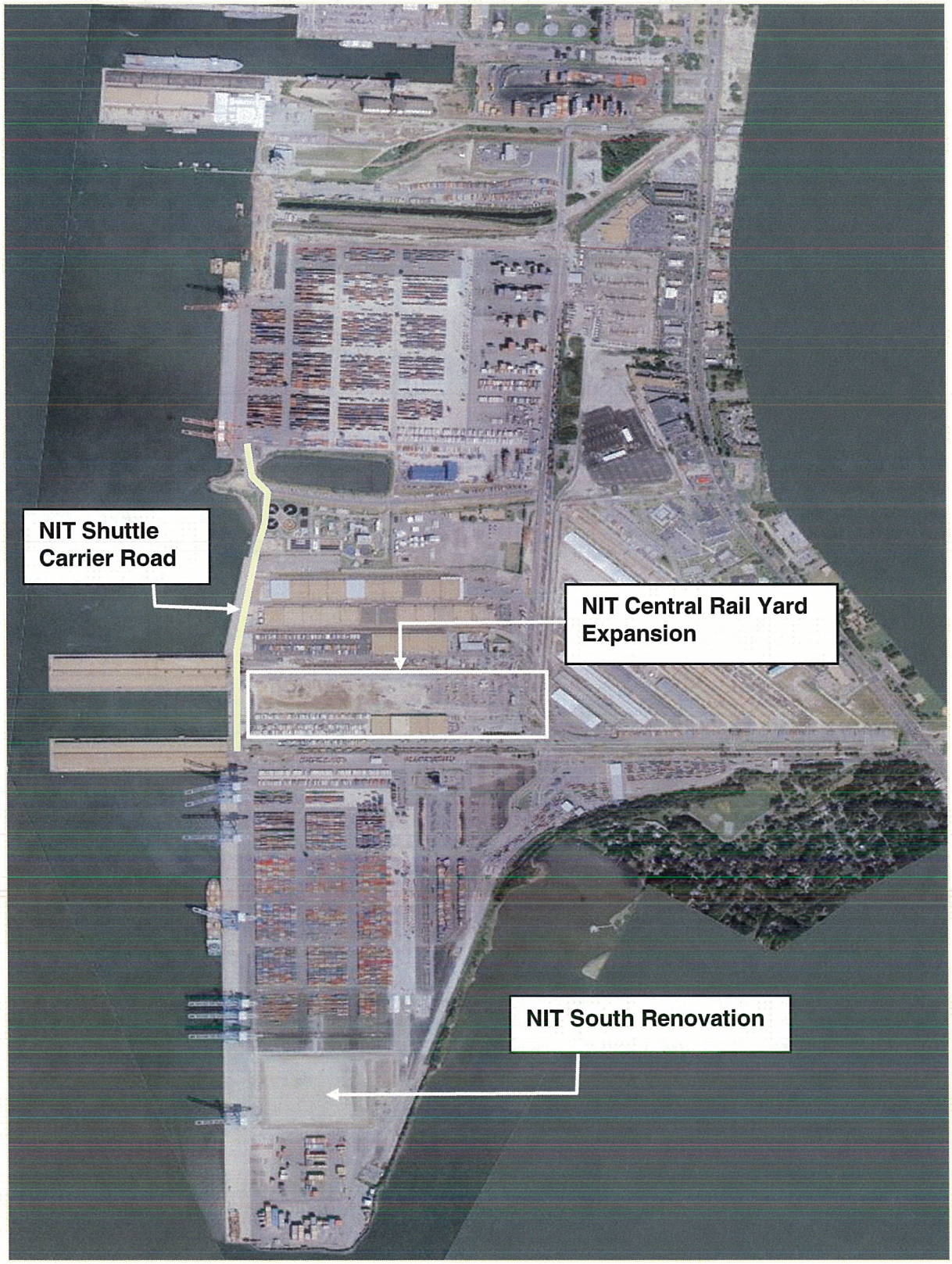


Figure 3: Norfolk International Terminals

4) Describe the Public Benefit of Project. Identify significant types of benefits and beneficiaries from this project. (See Attachment A)

The benefits of the NIT Central Rail Yard Expansion Project include:

a. Highway congestion relief by reducing the number of container truck movements along the State road network by over 600 trucks per day (a 15% reduction from today's level).
b. Eliminating over one-half (approximately 10/day) of the movements of trains along the Hampton/Terminal Blvd at grade crossing immediately outside the Terminal (i.e., more on-terminal space will be available for "building/staging" trains).
c. Improved security of containers through increased "within fenceline" staging of rail cars.
d. Decreased noise levels by over 30% for residents adjacent to present rail yard (i.e., loading/unloading of trains will be moved from an area immediately adjacent to a large residential area to over ½ mile away).
e. Enhanced Port competitiveness through improvements to on-terminal container handling efficiency and decreased off-terminal container shipping costs.

This project supports the following VTrans2025 goals:

a. Provide a safe, secure and integrated transportation system that reflects different needs of the Commonwealth *by decreasing Hampton/Terminal Blvd at-grade crossing movements by over 50%, and moving more containers by rail vice truck (250,000 TEUs/year).*
b. Facilitate the efficient movement of people and goods and expand choices and improve interconnectivity of all transportation modes *by increasing the efficiency of railcar loading operations and decreasing the number of truck movements along Commonwealth highways (>600/day or15% reduction from today's levels).*
c. Improve Virginia's economic vitality and provide access to economic opportunities for all Virginians *by increasing Port competitiveness.*
d. Improve the quality of life for Virginians and the coordination of transportation, land use and economic development planning activities *by reducing congestion on Commonwealth highways.*

The project also supports the following Virginia State Rail Plan goals:

a. Promote safety and security *by reducing the frequency of crossings at the Hampton/Terminal Blvd at-grade crossing and providing "within fenceline" staging of trains.*
b. Improve system capacity, reliability and speed *by facilitating increased container throughput at NIT and mitigating highway congestion.*
c. Improve intermodalism, connectivity and mobility *by increasing the rail share of intermodal traffic at NIT, and enabling an additional main line rail carrier, CSX, to have access to NIT.*

d. Improve Virginia's economic competitiveness and quality of life *by reducing the cost of handling containers at NIT, reducing congestion on roads, and reducing air pollution by reducing truck traffic from Port operations by 15% over today's levels.*

e. Support Virginia DRPT Public-Private partnership efforts and program delivery *by ensuring the project provides an excellent return on investment in terms of enhance productivity, air quality improvement and reduced congestion.*

5) Attachment A – Project Data Information Form – Must be completed by Applicant and submitted with this application.

H. Type of Project:

1) __ New Construction _x_ Rehabilitation __ Study

2) _x_ Rail Infrastructure _x_ Rail Facility/Station
__Equipment/Rolling Stock __Signals/Communication Equipment

3) Other _____

I. Application Scope of Work Covers:

_x_ Entire Project __ A Phase of a Multi-Phase Project __ Completion Phase

J. Project Budget Summary:

Preliminary Service, Engineering, or Feasibility Study	Complete
Environmental Evaluation	Complete
Design Engineering (Phase 1)	$746,000
Design Engineering (Phase 2)	$700,000
Right of Way Acquisition	N/A
Construction (Phase 1)	$17,500,000
Construction (Phase 2)	$17,475,000
Construction Management	Included Above
Lease/Acquisition of Equipment	$7,200,000
Public Involvement (if applicable)	N/A
Other _____	N/A
Subtotal Project Budget (Phase 1 & 2)	$43,621,000
Total Project Budget	$43,621,000

K. Attach detailed budget and schedule information. If the project is for final design, construction or procurement; then plans, specifications and reports to a preliminary engineering

level (approximately 30%) should be provided to support the project cost and major features (if applicable). A sample budget and schedule is included in Appendix D.

Fiscal Year	Project Design/Construction Costs	Rail Enhancement Funds
2007	$ 746,000	$ 0
2008	$ 17,500,000	$ 0
2009	4,300,000	$ 0
2010	$ 17,475,000	$ 17,475,000 (Phase 2 Construction)
2011	$ 3,600,000	$ 0

L. Rail Enhancement Funds Requested in this Application: $17,745,000

Maximum 70% of Total Project Budget. Do not include any previous allocations or future phases.

M. Local Match Provided by Applicant: $26,146,000

At least a minimum 30% of Total Project Budget

The Virginia Port Authority (VPA) will provide a 60% match for this project through terminal revenue funds from Virginia International Terminals (VIT) operations (as opposed to Commonwealth Port Funds provided by the Commonwealth of Virginia). VPA will fund Phase 1 Design and Construction, as well as Equipment Lease/Acquisition. Requested Rail Enhancement Funds (40%) are for Phase 2 Design and Construction.

If Overmatch, Provide Percentage: 60%

1) Match Breakdown by Source (Including any in-kind match)

a. Provider of Local Match: Virginia International Terminals

b. Status (confirmed/anticipated): Confirmed

c. Attach justification for value of in-kind match.

2) Other Funding Sources Beyond Match Requirement

a. Provider of Overmatch _____

b. Status (confirmed/anticipated) _____

N. Project implementation schedule (based in months). List major milestones of the project, including environmental review and public involvement points if applicable.

Phase 1 Design:	Complete (April 2007)
Phase 1 Construction Award:	July, 2007
Phase 1 Construction Completion:	September, 2008
Phase 2 Design Award:	Done
Phase 2 Design Completion:	Done

Phase 2 Construction Award: August, 2009
Phase 2 Construction Completion: October, 2010

O. Statement of how this project promotes or does not preclude dual/multi-access use.

All rail lines will have access to the NIT Central Rail Yard, although the main line to NIT is owned by Norfolk Southern. Other rail lines have to pay a switching fee to Norfolk Southern in order to use the main line. CSX recently obtained double stack clearance to Atlanta, and has requested to access NIT via Norfolk Southern. However, as previously noted, the current NIT rail yard is at maximum capacity. Thus, without this project, CSX may continue to be precluded from accessing NIT.

P. List additional users of rail line, facility, and/or equipment.

Norfolk Southern Railroad

Q. Identify any possible environmental or other issues/concerns within the scope of this project.

The State environmental impact report for the project was completed in April, 2007. Per the report, the project will have minimal, if any, long term negative effects on the natural and physical resources at NIT. There will be no permanent negative impact on air or water quality, and the project will not consume any significant areas of land, water, or aquatic habitats.

Required Attachments:
Application is not complete without items 1-5 completed by the Applicant and submitted with the Application.

1. Attachment A - Project Data Information Form (Provided)

2. Attachment B - Application Checklist (Provided)

3. Detailed cost, budget and schedule. Include preliminary engineering to 30% report, if applicable (Sample in Appendix D)

4. Certification of Match/% of Match/Documentation of Source of Match Including Defined Match Source (To be provided by Applicant)

5. Certification of Additive Investment (To be provided by Applicant)

6. Statement from the Applicant/Owner of the facility that the SWAM participation goals will be achieved by the project.

7. Statement from the owner of the facility that acknowledges the Commonwealth will have a public interest in the facilities, materials, equipment and improvements funded or impacted by this project (To be provided by Applicant/Owner)

Application and Attachment Certification

To the best of my knowledge all information contained in this application and its attachments is true. The information provided to the Virginia Department of Rail and Public Transportation (DRPT) is subject to full disclosure except where protected by Virginia Code. Any additional documentation related to this application will be provided to DRPT upon request.

Authorized Signature and Title:

[signature] CHIEF ENGINEER Date: 1-30-09

Virginia Department of Rail and Public Transportation
The Smartest Distance Between Two Points

Rail Enhancement Fund
Project Application
Completed Application Submission Information

One signed original, twelve copies, and an electronic copy in pdf format of the completed application and required documentation must be mailed under applicant cover to:

Director
Virginia Department of Rail and Public Transportation
1313 East Main Street, Suite 300
Richmond, VA 23219

Certification of Match

The Virginia Port Authority (VPA) has applied to the Commonwealth of Virginia for Department of Rail and Public Transportation Rail Enhancement Funds in the amount of $17,475,000 to assist in funding the project to expand the Norfolk International Terminals Central Rail Yard. The percentage of Rail Enhancement Funding requested is 30% of the total estimated project cost.

The total estimated cost for the project is $43,621,000. As an attachment to the funding application, this document certifies that VPA will provide a 60% funding match in the amount of $26,146,000 from revenue generated from Virginia International Terminals (VIT) terminal operations (as opposed to Commonwealth Port Funds provided by the Commonwealth of Virginia), which constitutes the remaining balance of the estimated cost.

Kevin Abt
Chief Engineer
Virginia Port Authority

Certification of Additive Investment

This certifies that the Commonwealth of Virginia Rail Enhancement Funds requested in this application will add significant capital improvements to the state's rail infrastructure, and result in public benefits to the Commonwealth that are greater than the actual amount of public funds invested.

Kevin Abt
Chief Engineer
Virginia Port Authority

Statement from the Applicant

SWAM Participation Goals to be Achieved by the Project

This is to certify that the Virginia Port Authority will work to achieve the Small, Women-owned, and Minority-owned (SWaM) participation goals in the project for which these Rail Enhancement Funds are requested, as directed by Executive Order 33 (2006) from the Governor of the Commonwealth of Virginia.

Kevin Abt
Chief Engineer
Virginia Port Authority

Statement from the Applicant

Acknowledgement of Commonwealth Public Interest

This statement from the Virginia Port Authority acknowledges that the Commonwealth of Virginia will have a public interest in the facilities, materials, equipment, and improvements funded or impacted by this project.

Kevin Abt
Chief Engineer
Virginia Port Authority

Virginia Department of Rail and Public Transportation
The Smartest Distance Between Two Points

Rail Enhancement Fund
Project Application

Internal Use
DRPT Tracking #

Attachment A
Project Data Information Form

Date: **01/30/2009**

Name of Applicant and Project

Virginia Port Authority
Norfolk International Terminals Central Rail Yard Expansion

General Instructions: Please complete the following forms that apply to the project application.

- For Freight Service projects, complete forms A1, A2 and A5
- For Intercity/Amtrak passenger projects, complete forms A1, A3 and A5
- For Commuter/VRE passenger projects, complete forms A1, A4 and A5
- For projects that involve benefits to both freight and passenger projects, form A1 and forms A2-A4 that apply must be completed. For each completed form A2-A4, a form A5 must be completed for each category for projects resulting in multiple project benefits.

Terms:

Project Cost and Construction Period: Form A1 shall be completed with total project cost by year of expenditure with total DRPT cost identified by year of expenditure. This section must be completed for all project applications.

Demand Characteristics: This category of information relates to the additional demand for rail service (including freight and passenger) due to the project. This additional demand must be over and above baseline conditions that currently exist. The specific data to enter here defines initial demand, steady state demand, and the years until steady state demand is achieved.

Steady State Demand: This term refers to the point at which the project benefits/demand have reached a long-term, sustainable level.

Project Impact on Travel Distance: This category of information includes the distance that would be traveled by vehicle or train. All distances should be limited to miles within Virginia. The distance should relate directly to the project-impacted area.

Demand Characteristics for a 15-year Performance Period: This term refers to the project output by performance year, which will be utilized to determine the public benefits and to determine the performance requirements over the 15-year Performance Period of the Grant Agreement.

Attachment A
Form A1 – Project Cost and Construction Period

First Construction Year: FY 2007

Last Construction Year: FY 2011

Fiscal Year	Total Project COST	Total DRPT COST
2007	$ 746,000	0
2008	$17,500,000	0
2009	$ 4,300,000	0
2010	$17,475,000	$ 17,475,000
2011	$ 3,600,000	0
Total	$ 43,621,000	**$** 17,475,000

Use Form A-5 to provide demand characteristics for the 15-Year Performance Period.

Attachment A
Form A2 – Freight Service

	CATEGORY	UNITS	VALUE
Demand Characteristics	Steady state demand – diversion of freight to rail (from trucks)	Carloads/Year	62,500
	First year of diversion	Carloads/Year	15,625
	Number of years until steady state	Number of Years	4

	CATEGORY	UNITS	VALUE
Project Impact on Travel Distance	Rail miles in Virginia (Existing routing before project)	Miles	2.46
	Rail miles in Virginia (routing after project completion)	Miles	7.01
	Number of years until steady state	Miles	4

	CATEGORY	UNITS	VALUE
Conversions	Railcars per Train	Railcars/Trains	100
	Rail tons per Railcar	Tons/Railcar	23.76
	Trucks per Railcar	Trucks/Railcar	4

	CATEGORY	UNITS	VALUE
Other	Change in Daily Delay for Freight Trains	Railcars/Trains	N/A
	Reduction in Number of Rail At-Grade Crossings	Tons/Railcar	N/A

Use Form A-5 to provide demand characteristics for the 15-Year Performance Period.

Attachment A
Form A5 – Demand Characteristics for 15-Year Performance Period

Performance Year	Performance Value*
1	62,500
2	125,000
3	187,500
4	250,000
5	250,000
6	250,000
7	250,000
8	250,000
9	250,000
10	250,000
14	250,000
12	250,000
13	250,000
14	250,000
15	250,000
Total	3,375,000

* For Freight Service Projects – car loads or containers per year
For Inter-City / Amtrak Passenger Projects – passengers per year
For Commuter / VRE Passenger Projects – passengers per year

Virginia Department of Rail and Public Transportation
The Smartest Distance Between Two Points

Rail Enhancement Fund
Project Application Checklist
Attachment B

Internal Use

DRPT Tracking #

Date: **01/30/2009**

Name of Applicant and Project:
Virginia Port Authority
Expand Norfolk International Terminals Central Rail Yard

Checklist for Application

1. Project is consistent with goals of applicable adopted state, regional and/or local plans.

_x_Yes ___No

2. Project is an Additive Investment to Virginia.

_x_Yes ___No

3. Project provides for, or does not preclude, shared or dual access opportunity.

_x_Yes ___No

4. Applicant has provided documentation and certification of at least a minimum 30% match.

_x_Yes ___No

5. Applicant has provided an environmental review plan and/or public involvement plan, if applicable, and required budget for this activity as outlined in Appendix D.

_x_Yes ___No

6. Application is complete, including signature and specified number of hard copies and an electronic (pdf file) copy; and Applicant has reviewed the Standard Agreement as provided in Appendix C.

_x__Yes ___No

PROJECT SCHEDULE

Sample Schedule for Notice to Proceed - Construction

Program: Rail Enhancement Fund
Project: Central Rail Yard, Phase 2
Updated Date: 1/30/2009

Scopes	Milestone Dates	2009												2010											
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Contract Award	08/01/09																								
Demolition																									
Site Work																									
Concrete Paving																									
Trackwork																									
Electrical																									
Project Completion	10/01/08																								

COST ESTIMATE - PRE-FINAL SUBMITTAL

CENTRAL RAIL YARD PHASE 2

Norfolk International Terminals

A/E: TranSystems | **Date of estimate:** 22.Dec.08

SUMMARY		MATERIAL Total Cost	LABOR Total Cost	EQUIPMENT Total Cost	TOTAL Cost
GENERAL CONDITIONS, MOB, DEMOB	2.50%	223,919	112,725	47,373	384,017
DEMOLITION		8,441	914,265	521,915	1,444,621
Earthwork		0	226,647	276,163	502,810
Pavements		5,443,326	406,395	252,173	6,101,894
Civil Utilities		1,641,081	797,682	235,222	2,673,985
Electrical		62,884	126,517	18,308	207,709
Rail (Includes Bypass Track Option B)		1,801,014	2,037,504	591,135	4,429,653
TOTAL BASE BID CONTRACT COST		9,180,665	4,621,735	1,942,289	**15,744,689**
BIDDING CLIMATE ADJUSTMENT	2%	183,613	92,435	38,846	**314,894**
SUBTOTAL		9,364,278	4,714,170	1,981,135	**16,059,583**
GROSS RECIEPT TAX	3.63%	339,923	171,124	71,915	**582,963**
TOTAL		9,704,201	4,885,294	2,053,050	**16,642,546**
DESIGN AND CONSTRUCTION CONTINGENCY	5.00%				**832,127**
TOTAL CONSTRUCTION CONTRACT BUDGET REQUIREMENTS					**17,475,000**

Print Date: 30.Jan.09

COST ESTIMATE - PRE-FINAL SUBMITTAL

CENTRAL RAIL YARD PHASE 2

Norfolk International Terminals

Date of estimate: 22.Dec.08
Print Date: 30.Jan.09

A/E: **TranSystems**

No.	Description of Work Item	Quantity	Unit	MATERIAL Unit Cost	MATERIAL Total Cost	LABOR Unit Cost	LABOR Total Cost	EQUIPMENT Unit Cost	EQUIPMENT Total Cost	TOTAL Unit Cost	TOTAL Cost
	DEMOLITION										
1	Rem, crush & stockpile 8" mudslab	24,865	SY		0	9.22	229,255	6.77	168336	15.99	397,591
2	Rem. Crush & stockpile 8" mudslab & 2 " bitum.	4,159	SY		0	11.20	46,581	9.16	38096	20.36	84,677
3	Rem. Crush & stockpile 6" bituminous	41,818	SY		0	3.24	135,490	2.39	99945	5.63	235,435
5	Remove building foundations	4,464	LF		0	10.15	45,310	5.80	25891	15.95	71,201
6	Sawcut Pavement for Removal	6,407	LF	0.78	4,997	2.04	13,070	1.25	8009	4.07	26,076
8	Hauling waste material (bldgs, unsat mat'l)20mi	4,000	CY		0	9.30	37,200	14.06	56240	23.36	93,440
9	Remove 12" water line	410	LF		0	7.50	3,075	4.38	1796	11.88	4,871
10	Remove Sanitary Sewer	1,220	LF		0	6.60	8,052	2.50	3050	9.10	11,102
11	Remove Sanitary Structure	3	EA		0	192.00	576	75.00	225	267.00	801
12	Remove Storm Drain Pipe	2,385	LF		0	6.60	15,741	2.50	5963	9.10	21,704
13	Remove Storm Drain Structure	20	EA		0	192.00	3,840	75.00	1500	267.00	5,340
14	Remove and Reset Structure Frame and Grate	4	EA		0	114.00	456	43.75	175	157.75	631
15	Remove 2" gas line	542	LF		0	0.93	504	0.22	119	1.15	623
	Subtotal				**4,997**		**539,150**		**409,345**		**953,492**
	Taxes on Materials and Labor	0.0%			0		0				0
	Labor Costs	33.0%			**1,649**		177,920				179,569
	Subtotal				**6,646**		**717,070**		**409,345**		**1,133,061**
	Overhead and Profit	25%			1,662		179,268		102,336		283,266
	Subtotal				**8,308**		**896,338**		**511,681**		**1,416,327**
	Bond	2%			133		17,927		10,234		**28,294**
	Total 02 41 00 DEMOLITION				**8,441**		**914,265**		**521,915**		**1,444,621**

COST ESTIMATE - PRE-FINAL SUBMITTAL | **Date of estimate:** 22.Dec.08

CENTRAL RAIL YARD PHASE 2

Norfolk International Terminals | **Print Date:** 30.Jan.09

A/E: **TranSystems**

No.	Description of Work Item	Quantity	Unit	MATERIAL Unit Cost	MATERIAL Total Cost	LABOR Unit Cost	LABOR Total Cost	EQUIPMENT Unit Cost	EQUIPMENT Total Cost	TOTAL Unit Cost	TOTAL Cost
	Earthwork										
1	Cut, Load, and Haul (1 mi) with Scraper	30408	CY		0	3.30	100,346	5.81	176,670	9.11	277,016
2	Fine Grade with Motor Grader	55245	SY		0	0.54	29,832	0.51	28,175	1.05	58,007
3	Compact to 95% D1557 with Sheeps Foot	11993	CY		0	0.29	3,478	0.98	11753	1.27	15,231
4					0		0		0	0.00	0
	Subtotal				**0**		**133,656**		**216,598**		**350,254**
	Taxes on Materials and Labor	0.0%			0		0				0
	Labor Costs	33.0%					44,106				44,106
	Subtotal				**0**		**177,762**		**216,598**		**394,360**
	Overhead and Profit	25%			0		44,441		54,150		98,591
	Subtotal				**0**		**222,203**		**270,748**		**492,951**
	Bond	2%			0		4,444		5,415		9,859
	Total 31 23 00.00 20 EXCAVATION AND FILL				**0**		**226,647**		**276,163**		**502,810**

COST ESTIMATE - PRE-FINAL SUBMITTAL

CENTRAL RAIL YARD PHASE 2

Norfolk International Terminals

Date of estimate: **22.Dec.08**

Print Date: **30.Jan.09**

A/E: **TranSystems**

No.	Description of Work Item	Quantity	Unit	MATERIAL Unit Cost	MATERIAL Total Cost	LABOR Unit Cost	LABOR Total Cost	EQUIPMENT Unit Cost	EQUIPMENT Total Cost	TOTAL Unit Cost	TOTAL Cost
	Pavements										
	Central Rail Yard										
1	Separation Layer	55245	SY	2.50	138,113	1.50	82,868	0.63	34804	4.63	255,785
2	Base Course 12"T VDOT 21A	33561	Ton	23.13	776,266	1.92	64,437	1.75	58732	26.80	899,435
3	Roller Compacted Concrete 18"T	55245	SY	42.00	2,320,290	0.87	48,063	1.10	60770	43.97	2,429,123
4	Asphalt Surface Course 4"T	12154	Ton	81.25	987,513	3.00	36,462	3.13	38042	87.38	1,062,017
5	Cast In Place Section and Panels (60'x31(	1449	SY	32.50	47,093	5.40	7,825	3.75	5434	41.65	60,352
	Subtotal				**4,269,275**		**239,655**		**197,782**		**4,706,712**
	Taxes on Materials and Labor		0.0%		0		0				0
	Labor Costs		33.0%				79,086				79,086
		Subtotal			**4,269,275**		**318,741**		**197,782**		**4,785,798**
	Overhead and Profit		25%		1,067,319		79,685		49,446		1,196,450
		Subtotal			**5,336,594**		**398,426**		**247,228**		**5,982,248**
	Bond		2%		106,732		7,969		4,945		119,646
	Total 32 10 00 BITUMINOUS CONCRETE PAVEMENT				**5,443,326**		**406,395**		**252,173**		**6,101,894**

COST ESTIMATE - PRE-FINAL SUBMITTAL | **Date of estimate:** 22.Dec.08

CENTRAL RAIL YARD PHASE 2

Norfolk International Terminals | **Print Date:** 30.Jan.09

A/E: TranSystems

No.		Quantity	Unit	MATERIAL Unit Cost	MATERIAL Total Cost	LABOR Unit Cost	LABOR Total Cost	EQUIPMENT Unit Cost	EQUIPMENT Total Cost	TOTAL Unit Cost	TOTAL Cost
	Rail (Includes Bypass Track Option B)										
	Rail										
1	136 RE Class I Relay Rail CWR Track complete	9400	TF	60.00	564,000	53.00	498,200	20.00	188000	133.00	1,250,200
2	136 RE New High Strength Alloy and Fully Heat Tre	2000	TF	70.00	140,000	53.00	106,000	20.00	40000	143.00	286,000
3	No. 8 136 RE Turnout complete	6	ea	21,500.00	129,000	18,900.00	113,400	7,100.00	42600	47,500.00	285,000
4	Remove Existing Track	625	TF	0.00	0	15.00	9,375	3.00	1875	18.00	11,250
5	Compromise Joint 110-136RE	8	ea	400.00	3,200	350.00	2,800	130.00	1040	880.00	7,040
6	Bumping Post	6	ea	3,200.00	19,200	2,900.00	17,400	1,060.00	6360	7,160.00	42,960
7	Blue Flag Gate	6	ea	530.00	3,180	190.00	1,140	75.00	450	795.00	4,770
8	CIP Concrete Grade Crossing	432	TF	190.00	82,080	160.00	69,120	65.00	28080	415.00	179,280
9	CIP Concrete Grade Crossing End Plates	6	set	270.00	1,620	110.00	660	10.00	90	390.00	2,370
10	Elastomeric Grade Crossing	424	TF	120.00	50,880	110.00	46,640	40.00	16960	270.00	114,480
11	Subballast	7800	TN	10.00	78,000	10.00	78,000	3.25	25350	23.25	181,350
12	Track Underdrain	8400	LF	15.00	126,000	10.00	84,000	4.50	37800	29.50	247,800
	Bypass Track - Option B										
1	136 RE New High Strength Alloy and Fully Heat Tre	1600	TF	70.00	112,000	53.00	84,800	20.00	32000	143.00	228,800
2	No. 8 136 RE Turnout complete	1	ea	21,500.00	21,500	18,900.00	18,900	7,100.00	7100	47,500.00	47,500
3	Remove Existing Track	200	TF	0.00	0	15.00	3,000	3.00	600	18.00	3,600
4	Compromise Joint 110-136RE	6	ea	400.00	2,400	350.00	2,100	130.00	780	880.00	5,280
5	Elastomeric Grade Crossing	100	TF	120.00	12,000	110.00	11,000	40.00	4000	270.00	27,000
6	Subballast	1200	TN	10.00	12,000	10.00	12,000	3.25	3900	23.25	27,900
7	Track Underdrain	1700	LF	15.00	25,500	10.00	17,000	4.50	7650	29.50	50,150
8	Remove Existing Turnout	2	ea	0.00	0	3,000.00	6,000	2,000.00	4000	5,000.00	10,000
9	Site and Utility Improvements	1	ls	30,000.00	30,000	20,000.00	20,000	15,000.00	15000	65,000.00	65,000
									OPTION B SUBTOTAL		465,230
	Total length of rail (TF)	9,400									
	Rail only, Cost per TF	471									
	Project Cost per TF	1,859									
	Subtotal				**1,412,560**		**1,201,535**		**463,635**		**3,077,730**
	Taxes on Materials and Labor	0.0%			0		0				0
	Labor Costs	33.0%					396,507				396,507
	Subtotal				**1,412,560**		**1,598,042**		**463,635**		**3,474,237**
	Overhead and Profit	25%			353,140		399,511		115,909		868,560
	Subtotal				**1,765,700**		**1,997,553**		**579,544**		**4,342,797**
	Bond	2%			35,314		39,951		11,591		86,856
					1,801,014		**2,037,504**		**591,135**		**4,429,653**

COST ESTIMATE - PRE-FINAL SUBMITTAL | **Date of estimate:** 22.Dec.08

CENTRAL RAIL YARD PHASE 2

Norfolk International Terminals | **Print Date:** 30.Jan.09

A/E: **TranSystems**

No.	Description of Work Item	Quantity	Unit	MATERIAL Unit Cost	MATERIAL Total Cost	LABOR Unit Cost	LABOR Total Cost	EQUIPMENT Unit Cost	EQUIPMENT Total Cost	TOTAL Unit Cost	TOTAL Cost
	Civil Utilities										
1	Storm Splitter Boxes - AREMA Rated	20	EA	8,000.00	160,000	4,000.00	80,000		0	12,000.00	240,000
2	Storm Pipe 8"D, incl. Trenching class V	215	LF	36.00	7,740	15.00	3,225	8.50	1828	59.50	12,793
3	Storm Pipe24"D, incl.Trenching class V	1305	LF	41.56	54,236	19.00	24,795	16.80	21924	77.36	100,955
4	Storm Pipe 36"D, incl.Trenching class V		LF	81.25	0	34.50	0	25.30	0	141.05	0
5	Storm Pipe 48"D, incl.Trenching class V	348	LF	125.00	43,500	44.75	15,573	42.50	14790	212.25	73,863
6	Storm Pipe 60"D incl. Trenching class V	1743	LF	325.00	566,475	75.50	131,597	59.30	103360	459.80	801,432
7	Water Pipe 8"D, incl Fittings and Trenching	2445	LF	28.19	68,925	13.74	33,594	6.75	16504	48.68	119,023
8	Fire Hydrants	3	EA	3,375.00	10,125	1,080.00	3,240	0.00	0	4,455.00	13,365
9	Underdrains - 15"D Perf. Asp Coated Steel	7525	LF	16.15	121,529	6.00	45,150	1.25	9406	23.40	176,085
10	Geofabric	14005	SY	1.56	21,848	0.30	4,202		0	1.86	26,050
11	Sanitary Sewer Pipe - 8"D	1,219	LF	46.25	56,379	7.20	8,777	2.50	3048	55.95	68,204
12	Sanitary Sewer Structures	5	EA	2,187.50	10,938	4,200.00	21,000		0	6,387.50	31,938
13	Subdrainage Aggregate	3634.12	TN	12.50	45,427	10.80	39,248	3.75	13628	27.05	98,303
14	Junction Boxes - Airfield Rated	6	EA	20,000.00	120,000	10,000.00	60,000		0	30,000.00	180,000
	Subtotal				**1,287,122**		**470,401**		**184,488**		**1,942,011**
	Taxes on Materials and Labor	0.0%			0		0				0
	Labor Costs	33.0%					155,232				155,232
	Subtotal				**1,287,122**		**625,633**		**184,488**		**2,097,243**
	Overhead and Profit	25%			321,781		156,408		46,122		524,311
	Subtotal				**1,608,903**		**782,041**		**230,610**		**2,621,554**
	Bond	2%			32,178		15,641		4,612		52,431
	Total Civil Utilities				**1,641,081**		**797,682**		**235,222**		**2,673,985**

COST ESTIMATE - PRE-FINAL SUBMITTAL

CENTRAL RAIL YARD PHASE 2

Norfolk International Terminals

Date of estimate: 22.Dec.08
Print Date: 30.Jan.09

A/E: TranSystems

No.	Description of Work Item	Quantity	Unit	MATERIAL Unit Cost	MATERIAL Total Cost	LABOR Unit Cost	LABOR Total Cost	EQUIPMENT Unit Cost	EQUIPMENT Total Cost	TOTAL Unit Cost	TOTAL Cost
	Electrical										
1	Relocate 100' Steel pole with 8-1000w HPS illuminaires	2	ea	1,200.00	2,400	$ 2,500.00	5,000	$ 5,000.00	10000	8,700.00	17,400
2	7-1000 HPS Illuminaires & wiring on Salvaged 100' Steel pole	1	ea	12,000.00	12,000	$ 13,000.00	13,000	$ 1,000.00	1000	26,000.00	26,000
3	Paint relocated poles	3	ea	125.00	375	$ 750.00	2,250	$ 100.00	300	975.00	2,925
4	Concrete Base	3	ea	4,000.00	12,000	$ 6,000.00	18,000	$ 500.00	1500	10,500.00	31,500
5	Ground rods	3	ea	25.00	75	$ 125.00	375		0	150.00	450
	#4 ground	150	lf	0.67	101	$ 0.42	63		0	1.09	164
6	Connect to existing manholes	2	ea	$ 1,000.00	2,000	$ 1,500.00	3,000	$ 500.00	1000	3,000.00	6,000
7	Mini zone panel	3	ea	2,300.00	6,900	$ 900.00	2,700		0	3,200.00	9,600
8	Concrete Duct Bank 2-way	300	lf	$ 4.00	1,200	$ 13.00	3,900	$ 0.31	93	17.31	5,193
9	Concrete Duct Bank 4-way	850	lf	$ 4.00	3,400	$ 13.00	11,050	$ 0.31	264	17.31	14,714
10	Concrete Duct Bank 6-way	650	lf	$ 4.00	2,600	$ 13.00	8,450	$ 0.31	202	17.31	11,252
11	# 2 Conductors	3800	lf	$ 0.65	2,470	$ 0.70	2,660		0	1.35	5,130
12	# 4 conductors	2000	lf	$ 0.45	900	$ 0.60	1,200		0	1.05	2,100
13	# 8 Conductors	1000	lf	0.22	220	$ 0.40	400		0	0.62	620
14	# 4 bare ground	4000	lf	0.67	2,680	$ 0.64	2,560		0	1.31	5,240
	Subtotal				**49,321**		**74,608**		**14,359**		**138,288**
	Taxes on Materials and Labor		0.0%		0		0				0
	Labor Costs		33.0%				24,621				24,621
		Subtotal			**49,321**		**99,229**		**14,359**		**162,909**
	Overhead and Profit		25%		12,330		24,807		3,590		40,727
		Subtotal			**61,651**		**124,036**		**17,949**		**203,636**
	Bond		2%		1,233		2,481		359		4,073
					62,884		**126,517**		**18,308**		**207,709**